

Call for Contributions for

Submission:

1. **Inform the Chair:** with the Title of your Contribution

2. **Submission URL:**

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CYBER+2018+Special>

Please select Track Preference as **BDCF**

Special track

BDCF: Big Data and Cloud Forensics

Chair and Organizer

Dr Petra Leimich, The Cyber Academy, Edinburgh Napier University, Edinburgh, UK

P.Leimich@napier.ac.uk

along with

CYBER 2018, The Third International Conference on Cyber-Technologies and Cyber-Systems

<http://www.iaria.org/conferences2018/CYBER18.html>

November 18 - 22, 2018 - Athens, Greece

Traditionally, much of Digital Forensics has been focused on standalone or smaller networked systems. However, the increasing use of cloud-based architectures and big data systems is challenging established Digital Forensics methods. As criminals make use of cloud storage, forensic investigators need methods to acquire and analyse artefacts from the cloud. Exploring solutions for the technical and legal challenges posed is the first objective of this track.

Secondly, as corporations continue to adopt Big Data technologies and store increasingly valuable data in distributed systems and the cloud, this is becoming an expanding target for criminals. The question therefore is not if, but when, the first major Big Data security breach will happen. In such an event, the large data volumes, non-traditional architecture and remote cloud storage, often using distributed file systems and/or NoSQL, pose serious challenges for Incident Response. With established approaches infeasible in such situations, the development of methods for the forensic analysis of compromised cloud and distributed systems is therefore paramount, and the second objective of this track.

Finally, cloud and distributed systems could potentially offer new approaches and solutions to the forensic data volume problem. In addition to offering vast data storage for forensic images, related technologies such as machine learning, Big Data Analytics, and distributed processing could be leveraged to help with forensic data analysis. Examples of emerging concepts in this regard include DFaaS (Digital Forensics as a Service). Advancing such techniques is the third objective of this special track.

Topics include, but not limited to:

- Cloud Storage Forensics
- Empirical studies and taxonomies relating to how Cloud systems are used by criminals
- Tackling legal challenges related to Cloud Storage Forensics
- Investigation of local device and network artefacts that could aid in Cloud investigations
- Forensic analysis of distributed file systems (e.g. Hadoop), including internal network traffic
- Forensic analysis of NoSQL and memory-resident databases
- Incident response, triage and data reduction methods for Cloud and Big Data security breaches.
- Data Mining, Machine Learning and Statistical Modelling for Digital Forensics
- Using Big Data Analytics in Digital Forensics
- DFaaS (Digital-Forensics-as-a-Service)
- Development of forensic tools that leverage machine learning methods and data analytics

- Development of forensic tools for distributed systems

Important Datelines

Inform the Chair: As soon as you decided to contribute

Submission: ~~August 1~~ **October 5**

Notification: ~~September 1~~ **October 20**

Registration: ~~September 15~~ **October 30**

Camera-ready: ~~September 25~~ **October 30**

Note: These deadlines are somewhat flexible, providing arrangements are made ahead of time with the chair.

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format

- See: <http://www.iaria.org/format.html>
- Before submission, please check and comply with the editorial rules: <http://www.iaria.org/editorialrules.html>

Publications

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iariajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the free access ThinkMind Digital Library: <http://www.thinkmind.org>

Paper Submission

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CYBER+2018+Special>

Please select Track Preference as **BDCF**

Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaria.org/registration.html>

Contacts

Petra Leimich, P.Leimich@napier.ac.uk

CYBER Logistics: steve@iaria.org
